

# Reintroduction of Federally Listed Fish

*under nonessential experimental population status in Shoal Creek, Lawrence County, Tennessee and Lauderdale County, Alabama*



## Boulder Darter Fast Facts

Common and scientific names:  
Boulder darter (*Etheostoma wapiti*)

Status: Listed endangered on  
September 1, 1988.

Description: The boulder darter is an olive to gray colored fish. It is a small fish, approximately three inches in length.

Habitat: This species prefers fast moving water over large boulder and slab rock substrate. They require good water quality and free flowing water.

Diet: This species is thought to feed primarily on immature aquatic insects.

Life history: Little is known about the life history of this fish. We have learned from the captive population that this fish spawns in April and May.

Natural enemies: Larger predatory fish species.

Threats to survival: Factors such as high silt levels from major land use changes, improper pesticide/herbicide use, and toxic chemical spills.

## Spotfin Chub Fast Facts

Common and scientific names:  
Spotfin chub (*Erimonax monachus*)

Status: Listed threatened on  
September 9 1977.

Description: The spotfin chub is a small, slender fish, not exceeding 4 inches in length. Juveniles, females, and nonbreeding males have olive colored backs, bright silvery sides, and white bellies. Large breeding males have brilliant turquoise-royal blue coloring on the back, side of the head, and along the mid-lateral part of their bodies.

Habitat: This fish inhabits clear water over gravel, boulders, and bedrock in large creeks and medium-sized rivers having moderate current. This fish is rarely seen over sand, and it appears to avoid silty areas.

Diet: Spotfin chubs eat tiny insect larvae that occur on the stream bottom.

Life history: This species spawns from mid-May to early September. Females deposit eggs in crevices between rocks. Males fertilize the eggs and stay to defend them by swimming repeatedly over the nest site. Most spotfin chubs reach sexual maturity at two years of age and apparently do not live past three years of age.

Natural enemies: Larger predatory fish species.

Threats to survival: Factors such as high silt levels from major land use changes, improper pesticide/herbicide use, and toxic chemical spills.



*Boulder darter by J. R. Shute, Conservation Fisheries, Inc.*



*Spotfin chub male in breeding colors by T. R. Russ*

## Why has the Service developed this proposed rule to designate NEP status for the boulder darter and spotfin chub?

This action could lead to reestablishing these species in Shoal Creek from the mouth of Long Branch in Tennessee to the backwaters of the Wilson Reservoir in Alabama. It was developed at the request of the Commissioner of the Alabama Department of Conservation and Natural Resources and the Executive Director of the Tennessee Wildlife Resources Agency and is part of a major state, federal, and non-governmental organization recovery initiative for imperiled fishes. The objective of this action is to improve the status of these species to the point where Endangered Species Act (Act) protection is no longer required.

## What does a nonessential experimental population (NEP) designation mean?

While the boulder darter and spotfin chub are protected by the Endangered Species Act, if this rule is made final, these fish would be designated as a nonessential experimental population by the U.S. Fish and Wildlife Service (Service) when reintroduced in Shoal Creek. A nonessential-experimental population is one that is not essential to the species' continued existence. This special designation provides greater flexibility for actions taken to manage the species and allows for less disruption or restriction of human activities as a result of the reintroduction of these species. In fact, the anticipated success of these reintroductions will enhance the species' conservation and recovery potential by extending their ranges into currently unoccupied historical habitat.

## Why was Shoal Creek in Tennessee and Alabama chosen for the NEP?

Rakes and Shute (1999) concluded that about 20 CM (32 km) of Shoal Creek above the backwaters of the Wilson Reservoir appeared to contain suitable reintroduction habitat for both fishes. The boulder darter and spotfin chub were last collected from Shoal Creek in the 1880s and since then both were apparently extirpated from this reach. We believe the boulder darter was extirpated by the combined effects of water pollution and the impoundment of lower Shoal Creek with the construction of Wilson Dam (Service 1989). We believe the spotfin chub was extirpated for similar reasons. Now, the quality of the remaining fish habitat and its biological resources have improved, the technology exists to propagate rare fishes, and the necessary partnerships are in place to initiate this project.

### Where will the two fishes be released?

They will be released into historical habitat in the free-flowing reach of Shoal Creek from between creek mile 33 and CM 14. This reach is totally within the proposed NEP Area and contains the most suitable habitat for reintroductions within the proposed NEP area. Neither species currently exists in Shoal Creek or its tributaries.

### What if the two fishes move from the release site?

To ensure that any reintroduced species that may move are covered by the NEP designations, the NEP boundaries will extend from the mouth of Long Branch, Lawrence County, Tennessee (Shoal Creek mile (CM) 41.7 (66.7 kilometers (km)), downstream to the backwaters of the Wilson Reservoir at Goose Shoals, Lauderdale County, Alabama (approximately CM 14.0 (22.4 km)), and would include the lower 5 CM (8 km) of all tributaries that enter this reach. In the future, if any of these fishes are found upstream beyond the lower 5 RM (8 km) of these tributaries or downstream, we will presume the animals came from the reintroduction. We would then propose to amend the rule to extend the NEP Area boundaries to include the entire range of the expanded population.

### What activities are allowed within the NEP?

Regulatory relief is also provided regarding take of reintroduced species within NEP areas. A special rule is included with this designation stipulating that there will be no violation of the Act for unavoidable and unintentional take (including killing or injuring) of these reintroduced fishes, when such take is accidental and incidental to an otherwise lawful activity (for example agricultural activities and recreational activities such as fishing, boating, wading, swimming, or trapping) and the activity is in accordance with State laws or regulations and the Act.

### What activities will be prohibited because of this NEP?

You may not take the boulder darter and spotfin chub within these NEP areas except in accordance with the applicable laws or regulations of the States of Alabama and Tennessee and as provided by these rules. We may refer unauthorized take of these species to the appropriate authorities for prosecution. You may not possess, sell, deliver, carry, transport, ship, import, or export by any means whatsoever any of these fishes, or parts thereof, that are taken or possessed in violation of these regulations or in violation of the applicable State fish and wildlife laws or regulations or the Act.

### What will we do for these species after they are released?

After the first initial stocking of these two fish, we will monitor annually their presence or absence and document any spawning behavior or young of the year fish that might be present. This monitoring will be conducted primarily by snorkeling or seining and will be accomplished by contracting with the appropriate species experts. Annual reports will be produced detailing the stocking rates and monitoring activities that took place during the previous year. We will prepare periodic progress reports and fully evaluate these reintroduction efforts after 5 and 10 years to determine whether to continue or terminate the project. We will work cooperatively with Federal State and local agencies and willing private landowners to continue to improve the species habitat.

### Who should you contact for more information?

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